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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,285	06/08/2006	Yoshikazu Kuroumaru	20708/0204992-US0	4944

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DARBY & DARBY P.C.
P.O. BOX 770
Church Street Station
New York, NY 10008-0770

EXAMINER

KNUTSON, JACOB D

ART UNIT	PAPER NUMBER
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3611

MAIL DATE	DELIVERY MODE
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12/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,285	Applicant(s) KUROUMARU ET AL.	
	Examiner JACOB KNUTSON	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/8/06, 7/12/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim **1 is** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The restrictions that claim for example “a number of teeth is equal to or more than 6 **and** equal to or less than 15”. This is unclear. Appropriate action is required

Comment [P1]: all the claims need to be included under 112 2nd re).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

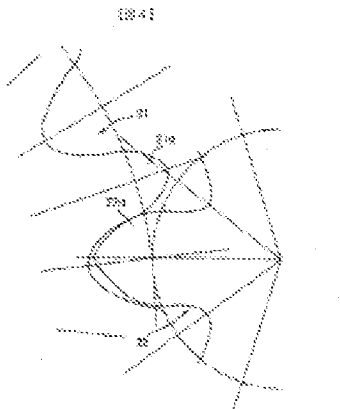
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **1 – 3 are** rejected under 35 U.S.C. 103(a) as being unpatentable over **Shibayama, Kazuya (JP 11-124045 A)**.

Shibayama Kazuya discloses a motor-driven power steering apparatus in which a rotating torque of an electric motor **33** is transmitted to a steering shaft **2** by a drive gear **21** provided in an output shaft **34** of said electric motor and a driven gear **20**

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provided in said steering shaft, and a speed reduction ratio is equal to or more than 3, wherein said steering shaft and the output shaft of said electric motor are arranged in almost parallel as shown in Fig. 1. Shibayama Kazuya shows a drive gear in Fig. 4 that would have 6 teeth.



However, Shibayama Kazuya does not explicitly disclose a center distance, module, tooth depth, pressure angle or a torsion angle of certain specifications.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use to include [a center distance between two shafts is equal to or more than 35 mm and equal to or less than 90 mm, and said drive gear is configured such a module is equal to or more than 0.8 and equal to or less than 1.5, a tooth depth is equal to or less than 2.4 times of the module, and a pressure angle is equal to or more than 14.5 degrees and equal to or less than 30 degrees, and a torsion angle is equal to or more than 0 degree and equal to or less than 40 degrees] with the power steering

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apparatus of Shibayama to allow for the best mode of operation thus helping in reducing the wear and tear allowing for the longevity of the apparatus.

For claim 2, Shibayama Kazuya discloses a motor-driven power steering apparatus as claimed in claim 1, wherein an involute gear **20** or **21** in which a tooth profile is formed in such a manner that a pressure angle is increased from a tooth top of the gear to a tooth root is employed for one or both of said drive gear and said driven gear.

For claim 3, Shibayama Kazuya discloses a motor-driven power steering apparatus as claimed in claim 1 or 2, wherein an involute gear **20** or **21** in which a crowning process is applied in a direction of a tooth trace is employed for one or both of said drive gear and said driven gear.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Knutson whose telephone number is 571-270-5576. The examiner can normally be reached on Monday to Thursday, 6:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leslie Morris can be reached on 571-272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JK/

December 18, 2008

/Paul N. Dickson/
Supervisory Patent Examiner, Art Unit 3611